



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/068,319	02/05/2002	Takayuki Kijima	FUK-P195942.2	9690

3624 7590 08/25/2005

VOLPE AND KOENIG, P.C.  
UNITED PLAZA, SUITE 1600  
30 SOUTH 17TH STREET  
PHILADELPHIA, PA 19103

EXAMINER

HERNANDEZ, NELSON D

ART UNIT

PAPER NUMBER

2612

DATE MAILED: 08/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/068,319

Applicant(s)

KIJIMA ET AL.

Examiner

Nelson D. Hernandez

Art Unit

2612

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 February 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 11 and 15-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 20 is/are allowed.
- 6) ☒ Claim(s) 11 and 15-18 is/are rejected.
- 7) ☐ Claim(s) 19 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>2/5/2002</u> .  | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Response to Amendment***

1. Examiner acknowledges the amendments on the claims received on May 28, 2002. Amendments on the claims are acceptable.

### ***Claim Objections***

2. **Claim 11** is objected to because of the following informalities: in line 4, the semicolon after the word "scene" should be deleted so the limitation reads as follows: "a strobo means for illuminating the scene incident on the imaging element;".  
Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. **Claim 11** is rejected under 35 U.S.C. 102(b) as being anticipated by Kondo, US Patent 5,168,364.

**Regarding claim 11**, Kondo discloses an imaging apparatus (Fig. 3) having an imaging element (Solid-state image sensor shown in fig. 5: 13) for accumulating signal charge corresponding to an incident scene light flux in a photoelectric converting element section comprising: a strobo means (Flash device shown in fig. 5: 25) for illuminating the scene incident on the imaging element; a sweep-out means (See fig. 5:13) for sweeping out unnecessary charge in the imaging element; and a control

Art Unit: 2612

means (System controller shown in fig. 5: 15) for setting a lower sweep-out frequency (Using clock signal generating means shown in fig. 5: 26) of the sweep-out means when the strobo means is being charged than when the strobo means is not being charged (Since Kondo teaches that a lower frequency is being applied when the flash is not in use, inherently teaches that the sweep-out frequency is lower when charging the flash) (Col. 7, line 36 – col. 8, line 62).

5. **Claim 15** rejected under 35 U.S.C. 103(a) as being unpatentable over Kondo, US Patent 5,168,364 in view of Anderson, US Patent 5,963,255.

**Regarding claim 15**, Kondo discloses that the imaging element is powered by a power source but does not explicitly disclose the control means conducting voltage check operation for monitoring a power source voltage level to prevent charging of said strobo means when said voltage level is below a predetermined threshold voltage.

However, Anderson teaches a camera (Fig. 1: 10) comprising: a power supply unit (Fig. 1: 17); an image-capturing unit (Fig. 1: 14); wherein said power supply comprises a voltage sensor (Fig. 3: 76) for verifying the voltage level of the power supply so that when the power supply is below certain threshold, a power manager hardware (Fig. 3: 70) shuts down the charging of the flash unit (Fig. 2: 14) (Col. 3, lines 52 – col. 4, line 20; col. 5, line 29 – col. 6, line 33; col. 10, line 29 – col. 11, line 41).

Therefore, taking the combined teaching of Kondo in view of Anderson as a whole, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Kondo by having the control means conducting voltage check operation for monitoring a power source voltage level to prevent charging of said

Art Unit: 2612

strobo means when said voltage level is below a predetermined threshold voltage. The motivation to do so would have been to compensate for the power supply degradation in order to maximize the power supply's useable life and would optimize camera performance independent of the power supply's operating characteristics as suggested by Anderson (Col. 2, lines 40-44).

6. **Claims 16-19** are rejected under 35 U.S.C. 103(a) as being unpatentable over Kondo, US Patent 5,168,364 in view of Iida, US Patent 5,669,023.

**Regarding claims 16 and 17**, Kondo does not explicitly disclose that the imaging apparatus comprises a shutter release button movable to a partially depressed position and fully depressed position; and said control means initiating a voltage check operation when said shutter release button is moved to said partially depressed position.

However, Iida teaches a camera circuit (See fig. 1) for performing and controlling the performance of various camera functions, said camera comprises a release button movable to a half-depressed position and fully depressed position, wherein said camera performs a voltage check to the battery of the camera when the release button is half-depressed so as to determine if the camera is capable to perform other functions with the measured power of the battery, wherein said functions include charging the flash and distance measurement (See figs. 4 and 8; col. 1, lines 25-602; col. 2, lines 20-34; col. 3, line 6 – col. 4, line 41; col. 5, line 66 – col. 6, line 61).

Therefore, taking the combined teaching of Kondo in view of Iida as a whole, it would have been obvious to one of ordinary skill in the art at the time the invention was

Art Unit: 2612

made to modify Kondo by having a shutter release button movable to a partially depressed position and fully depressed position; and said control means initiating a voltage check operation when said shutter release button is moved to said partially depressed position. The motivation to do so would have been to conserve power as suggested by lida (Col. 1, lines 40-50).

**Regarding claim 18**, the combined teaching of Kondo in view of lida as applied to claims 16 and 17 teaches that the control means monitors said strobo means to determine if said strobo means is charging responsive to completion of a voltage check and movement of said shutter release button to said fully depressed position (See lida figs. 4 and 8; col. 1, lines 25-602; col. 2, lines 20-34; col. 3, line 6 – col. 4, line 41; col. 5, line 66 – col. 6, line 61).

***Allowable Subject Matter***

7. **Claim 20** is allowed.
8. **Claim 19** is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
9. The following is a statement of reasons for the indication of allowable subject matter:

**Regarding claim 20**, the main reason for indication of allowable subject matter is because the prior art fails to teach or reasonably suggest setting a frequency of a sweep out signal for sweeping out unnecessary charge from the imaging element whereby a higher frequency sweep out signal is set when an output voltage level of the

Art Unit: 2612

power source is greater than a first predetermined voltage and setting a lower frequency for the sweep out signal when the output voltage level is lower than said first predetermined voltage.

Kondo discloses an imaging apparatus (Fig. 3) having an imaging element (Solid-state image sensor shown in fig. 5: 13) for accumulating signal charge corresponding to an incident scene light flux in a photoelectric converting element section comprising: a strobo means (Flash device shown in fig. 5: 25) for illuminating the scene incident on the imaging element; a sweep-out means (See fig. 5:13) for sweeping out unnecessary charge in the imaging element; and a control means (System controller shown in fig. 5: 15) for setting a lower sweep-out frequency (Using clock signal generating means shown in fig. 5: 26) of the sweep-out means when the strobo means is being charged than when the strobo means is not being charged (Since Kondo teaches that a lower frequency is being applied when the flash is not in use, inherently teaches that the sweep-out frequency is lower when charging the flash) (Col. 7, line 36 – col. 8, line 62).

Anderson teaches a camera (Fig. 1: 10) comprising: a power supply unit (Fig. 1: 17); an image-capturing unit (Fig. 1: 14); wherein said power supply comprises a voltage sensor (Fig. 3: 76) for verifying the voltage level of the power supply so that when the power supply is below certain threshold, a power manager hardware (Fig. 3: 70) shuts down the charging of the flash unit (Fig. 2: 14) (Col. 3, lines 52 – col. 4, line 20; col. 5, line 29 – col. 6, line 33; col. 10, line 29 – col. 11, line 41).

lida teaches a camera circuit (See fig. 1) for performing and controlling the performance of various camera functions, said camera comprises a release button movable to a half-depressed position and fully depressed position, wherein said camera performs a voltage check to the battery of the camera when the release button is half-depressed so as to determine if the camera is capable to perform other functions with the measured power of the battery, wherein said functions include charging the flash and distance measurement (See figs. 4 and 8; col. 1, lines 25-602; col. 2, lines 20-34; col. 3, line 6 – col. 4, line 41; col. 5, line 66 – col. 6, line 61).

However, Kondo, Anderson and lida, either alone or in combination fail to teach or reasonably suggest setting a frequency of a sweep out signal for sweeping out unnecessary charge from the imaging element whereby a higher frequency sweep out signal is set when an output voltage level of the power source is greater than a first predetermined voltage and setting a lower frequency for the sweep out signal when the output voltage level is lower than said first predetermined voltage.

**Regarding claim 19**, the main reason for indication of allowable subject matter is because the prior art fails to teach or reasonably suggest means for returning to said voltage check operator when a previous voltage check operation is completed and the shutter release button has failed to said fully depressed position.

Kondo discloses an imaging apparatus (Fig. 3) having an imaging element (Solid-state image sensor shown in fig. 5: 13) for accumulating signal charge corresponding to an incident scene light flux in a photoelectric converting element section comprising: a strobo means (Flash device shown in fig. 5: 25) for illuminating



Art Unit: 2612

the scene incident on the imaging element; a sweep-out means (See fig. 5:13) for sweeping out unnecessary charge in the imaging element; and a control means (System controller shown in fig. 5: 15) for setting a lower sweep-out frequency (Using clock signal generating means shown in fig. 5: 26) of the sweep-out means when the strobo means is being charged than when the strobo means is not being charged (Since Kondo teaches that a lower frequency is being applied when the flash is not in use, inherently teaches that the sweep-out frequency is lower when charging the flash) (Col. 7, line 36 – col. 8, line 62).

Anderson teaches a camera (Fig. 1: 10) comprising: a power supply unit (Fig. 1: 17); an image-capturing unit (Fig. 1: 14); wherein said power supply comprises a voltage sensor (Fig. 3: 76) for verifying the voltage level of the power supply so that when the power supply is below certain threshold, a power manager hardware (Fig. 3: 70) shuts down the charging of the flash unit (Fig. 2: 14) (Col. 3, lines 52 – col. 4, line 20; col. 5, line 29 – col. 6, line 33; col. 10, line 29 – col. 11, line 41).

lida teaches a camera circuit (See fig. 1) for performing and controlling the performance of various camera functions, said camera comprises a release button movable to a half-depressed position and fully depressed position, wherein said camera performs a voltage check to the battery of the camera when the release button is half-depressed so as to determine if the camera is capable to perform other functions with the measured power of the battery, wherein said functions include charging the flash and distance measurement (See figs. 4 and 8; col. 1, lines 25-602; col. 2, lines 20-34; col. 3, line 6 – col. 4, line 41; col. 5, line 66 – col. 6, line 61).

However, Kondo, Anderson and Iida, either alone or in combination fail to teach or reasonably suggest means for returning to said voltage check operator when a previous voltage check operation is completed and the shutter release button has failed to said fully depressed position.

**Contact**

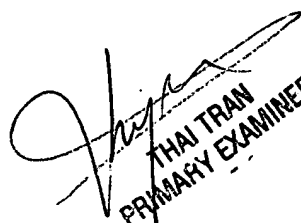
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nelson D. Hernandez whose telephone number is (571) 272-7311. The examiner can normally be reached on 8:00 A.M. to 5:30 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thai Tran can be reached on (571) 272-7382. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Nelson D. Hernandez  
Examiner  
Art Unit 2612

NDHH  
August 19, 2005

  
THAI TRAN  
PRIMARY EXAMINER